

=> FILE REG

FILE 'REGISTRY' ENTERED AT 11:06:11 ON 09 APR 2008
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=> D HIS

FILE 'HCAPLUS' ENTERED AT 10:22:53 ON 09 APR 2008

L1 617 S KEMNITZ ?/AU
L2 19355 S GROSS ?/AU
L3 1414 S RUEDIGER ?/AU OR RUDIGER ?/AU
L4 20 S L1 AND L2 AND L3
L5 70650 S FLUORIDE#/TI
L6 15 S L4 AND L5
SEL L6 11,12,14 RN

FILE 'REGISTRY' ENTERED AT 10:24:53 ON 09 APR 2008

L7 41 S E1-E41
L8 274737 S (M (L) F (L) C)/ELS
L9 2 S L7 AND L8

FILE 'HCAPLUS' ENTERED AT 10:29:54 ON 09 APR 2008

SEL L4 1-20 RN

FILE 'REGISTRY' ENTERED AT 10:30:01 ON 09 APR 2008

L10 143 S E42-E184
L11 2 S L10 AND L8
L12 2421 S (M (L) F)/ELS (L) 2/ELC.SUB
L13 51127 S 1/C AND F/ELS
L14 225 S L13 AND 2/ELC.SUB
L15 253 S L13 AND H/ELS AND 3/ELC.SUB
L16 113 S L13 AND CL/ELS AND 3/ELC.SUB
L17 218 S L13 AND H/ELS AND CL/ELS AND 4/ELC.SUB
L18 809 S L14-L17
L19 97557 S L8 AND 1/NC
L20 177180 S L8 NOT L19
E HYDROGEN FLUORIDE/CN
L21 1 S E3

FILE 'HCA' ENTERED AT 10:45:19 ON 09 APR 2008

L22 9050 S L12/P
L23 44488 S L19
L24 43445 S L18
L25 143938 S L21 OR HF OR HYDROGEN#(A)FLUORIDE# OR HYDROFLUORIC#(A)A

L26 115 S L22 AND L23
L27 4 S L26 AND L24
L28 18 S L26 AND L25
L29 426 S AMORPH?(2A) (FLUORIDE# OR DIFLUORIDE# OR TRIFLUORIDE# OR
L30 228611 S SURFACE?(2A) AREA# OR (SP# OR SPEC# OR SPECIFIC#) (2A) (SU
L31 126314 S L12
L32 1139 S L31 AND L23
L33 48 S L32 AND L24
L34 98 S L32 AND L25
L35 2 S (L33 OR L34) AND L29
L36 3 S (L33 OR L34) AND L30

FILE 'REGISTRY' ENTERED AT 10:55:18 ON 09 APR 2008
L37 93054 S L8 AND CCS/CI

FILE 'HCA' ENTERED AT 11:02:07 ON 09 APR 2008
L38 38043 S L37
L39 900 S L31 AND L38
L40 29 S L39 AND L24
L41 89 S L39 AND L25
L42 1 S (L40 OR L41) AND L29
L43 2 S (L40 OR L41) AND L30
L44 2 S L40 AND L22
L45 15 S L41 AND L22
L46 22 S L27 OR L28 OR L35 OR L36 OR L42 OR L43 OR L44 OR L45
L47 18 S 1840-2003/PY,PRY,AY AND L46

=> FILE HCA
FILE 'HCA' ENTERED AT 11:07:01 ON 09 APR 2008
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=> D L47 1-18 BIB ABS HITSTR HITIND

L47 ANSWER 1 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 141:125808 HCA Full-text
TI Method for the preparation of high surface area
metal fluorides
IN Kemnitz, Erhard; Gross, Udo; Ruediger, Stephan
PA Humboldt-Universitaet zu Berlin, Germany
SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

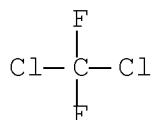
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004060806	A1	20040722	WO 2004-EP49	200401 07
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	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
	EP 1440939	A1	20040728	EP 2003-221	200301 07
					<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	EP 1585705	A1	20051019	EP 2004-700458	200401 07
					<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006514913	T	20060518	JP 2006-500526	200401 07
					<--
	US 20060052649	A1	20060309	US 2005-541612	200507 07
					<--
PRAI	EP 2003-221	A	20030107	<--	
	US 2003-438308P	P	20030107	<--	
	EP 2003-6656	A	20030325	<--	
	WO 2004-EP49	W	20040107		
AB	The present invention is related to a method for prep. an amorphous metal fluoride $M_x+F_{x-\delta}$ comprising the steps of (a) providing a precursor, whereby the precursor comprises a structure of $M_x+F_{(x-\delta)}-yBy$; and (b) reacting the precursor with a fluorinating agent generating the amorphous metal fluoride of $M_x+F_{x-\delta}$, whereby M is				

selected from the group comprising metals of the 2nd, 3rd and 4th main group and any subgroup of the periodic table, B is a coordinately bound group; x is 2 or 3; yr is any integer between 1 and 3; δ is 0 to 0.1; and $(x-\delta) > y$.

IT 75-71-8, Dichlorodifluoromethane
(CFC 12; method for prepn. of high surface area metal fluorides for use as catalysts)

RN 75-71-8 HCA

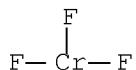
CN Methane, dichlorodifluoro- (CA INDEX NAME)



IT 7788-97-8P, Chromium (III) fluoride
(MgF₂ doped with; method for prepn. of high surface area metal fluorides for use as catalysts)

RN 7788-97-8 HCA

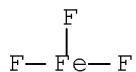
CN Chromium fluoride (CrF₃) (CA INDEX NAME)



IT 7783-50-8P, Ferric fluoride
(dopant for MgF₂; method for prepn. of high surface area metal fluorides for use as catalysts)

RN 7783-50-8 HCA

CN Iron fluoride (FeF₃) (CA INDEX NAME)



IT 24586-58-1DP, complexes with isopropanol
(intermediate; method for prepn. of high surface area metal fluorides for use as catalysts)

RN 24586-58-1 HCA

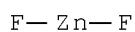
CN Aluminum, difluoro(2-propanolato)- (CA INDEX NAME)



IT 7783-49-5P, Zinc fluoride 11113-59-0P, Copper fluoride 11113-65-8P, Iron fluoride 39427-37-7P, Vanadium fluoride 55128-73-9P, Tin fluoride (method for prepn. of high surface area metal fluorides for use as catalysts)

RN 7783-49-5 HCA

CN Zinc fluoride (ZnF₂) (CA INDEX NAME)



RN 11113-59-0 HCA

CN Copper fluoride (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
F	x		14762-94-8
Cu	x		7440-50-8

RN 11113-65-8 HCA

CN Iron fluoride (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
F	x		14762-94-8
Fe	x		7439-89-6

RN 39427-37-7 HCA

CN Vanadium fluoride (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
F	x		14762-94-8
V	x		7440-62-2

RN 55128-73-9 HCA
CN Tin fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Sn	x	7440-31-5

IT 7783-40-6P, Magnesium fluoride (MgF₂) 7784-18-1P,
Aluminum fluoride (AlF₃)
(method for prepn. of high surface area metal
fluorides for use as catalysts)

RN 7783-40-6 HCA
CN Magnesium fluoride (MgF₂) (CA INDEX NAME)

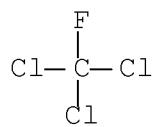
F—Mg—F

RN 7784-18-1 HCA
CN Aluminum fluoride (AlF₃) (CA INDEX NAME)

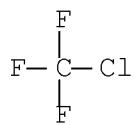


IT 75-69-4, Fluorotrichloromethane 75-72-9,
Chlorotrifluoromethane
(method for prepn. of high surface area metal
fluorides for use as catalysts)

RN 75-69-4 HCA
CN Methane, trichlorofluoro- (CA INDEX NAME)



RN 75-72-9 HCA
CN Methane, chlorotrifluoro- (CA INDEX NAME)



IT 7664-39-3, Hydrogen fluoride, reactions
 (method for prepn. of high surface area metal
 fluorides for use as catalysts)
 RN 7664-39-3 HCA
 CN Hydrofluoric acid (CA INDEX NAME)

HF

IC ICM C01F007-50
 ICS C01F005-28; C01B009-08
 CC 49-5 (Industrial Inorganic Chemicals)
 Section cross-reference(s): 67
 ST surface area metal fluoride fluorination
 catalyst coordination precursor solvent
 IT Enolates
 Metal alkoxides
 (C1- C5, metal fluoride complexes, precursors; method for prepn.
 of high surface area metal fluorides for use
 as catalysts)
 IT Coordination compounds
 (catalyst precursors; method for prepn. of high surface
 area metal fluorides for use as catalysts)
 IT Hydrocarbons, reactions
 (chlorofluorocarbons, fluorinating agents; method for prepn. of
 high surface area metal fluorides for use as
 catalysts)
 IT Controlled atmospheres
 (during fluorination reaction; method for prepn. of high
 surface area metal fluorides for use as
 catalysts)
 IT Amorphous materials
 (fluorides; method for prepn. of high surface
 area metal fluorides for use as catalysts)
 IT Alcohols, preparation
 (metal fluoride complexes; method for prepn. of high

surface area metal fluorides for use as catalysts)

IT Carboxylic acids, reactions
(metal salts, C1- C5, metal fluoride salts, precursors; method for prepn. of high surface area metal fluorides for use as catalysts)

IT Acetylation
Benzoylation
Disproportionation
Disproportionation catalysts
Fluorination
Fluorination
Hydrofluorination
Hydrofluorination catalysts
Isomerization
Isopropylation
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Fluorides, preparation
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Alcohols, reactions
Alkanes, reactions
Ethers, reactions
Ketones, reactions
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Lewis acids
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Alkaline earth compounds
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Group IIIA element compounds
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Group IVB element compounds
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT Solvents
(org.; method for prepn. of high surface area metal fluorides for use as catalysts)

IT Acetylation catalysts
Alkylation catalysts
Benzoylation catalysts
Catalysts
Isomerization catalysts

(prepn. of; method for prepn. of high surface area metal fluorides for use as catalysts)

IT 75-71-8, Dichlorodifluoromethane
(CFC 12; method for prepn. of high surface area metal fluorides for use as catalysts)

IT 7788-97-8P, Chromium (III) fluoride
(MgF₂ doped with; method for prepn. of high surface area metal fluorides for use as catalysts)

IT 7783-50-8P, Ferric fluoride
(dopant for MgF₂; method for prepn. of high surface area metal fluorides for use as catalysts)

IT 24586-58-1DP, complexes with isopropanol
(intermediate; method for prepn. of high surface area metal fluorides for use as catalysts)

IT 98-82-8P, Isopropylbenzene 100-06-1P 306-83-2P 354-33-6P
2837-89-0P 31287-77-1P, Methoxybenzophenone
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 7783-49-5P, Zinc fluoride 11113-56-7P, Chromium fluoride
11113-59-0P, Copper fluoride 11113-65-8P, Iron
fluoride 39427-37-7P, Vanadium fluoride
55128-73-9P, Tin fluoride
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 7783-40-6P, Magnesium fluoride (MgF₂) 7784-18-1P,
Aluminum fluoride (AlF₃)
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 75-69-4, Fluorotrichloromethane 75-72-9,
Chlorotrifluoromethane
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 67-56-1, Methanol, reactions
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 7727-37-9, Nitrogen, uses
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions
79-09-4, Propionic acid, reactions
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 71-43-2, Benzene, reactions 75-29-6, Isopropyl chloride 98-88-4,
Benzoyl chloride 100-66-3, Anisole, reactions 109-88-6
127-18-4, Tetrachloroethylene, reactions 555-31-7, Aluminum
triisopropoxide 661-95-0, 1,2-Dibromohexafluoropropane
1333-82-0, Chromium oxide (CrO₃) 7664-39-3,

Hydrogen fluoride, reactions 7705-08-0, Ferric chloride, reactions 10025-73-7, Chromium chloride (CrCl₃) 117533-90-1

(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 38568-21-7P, 2,2-Dibromohexafluoropropane
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 1344-28-1, Alumina, uses
(support; method for prepn. of high surface area metal fluorides for use as catalysts)

L47 ANSWER 2 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 136:121969 HCA Full-text

TI Preparation and etching processing of planar thin film of Pr³⁺-doped fluorozirconate glass

AU Kawamoto, Y.; Teramoto, M.; Hatano, T.; Shojiya, M.

CS Department of Chemistry, Faculty of Science, Kobe University, Kobe, 657-8501, Japan

SO Journal of Materials Science (2001), 36(20), 5013-5016

CODEN: JMTSAS; ISSN: 0022-2461

PB Kluwer Academic Publishers

DT Journal

LA English

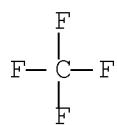
AB Planar thin-films of a 60ZrF₄·35BaF₂·5PrF₃ compn. were successfully prepd. from Zr(hfa)₄, Ba(hfa)₂(tg), Pr(fod)₃ and NF₃ by an electron cyclotron resonance plasma-enhanced chem. vapor deposition technique. The films obtained were colorless and amorphous. As etching processing of the prepd. thin-film, dry etching was performed using Ar, CF₄, SF₆, Cl₂ and Cl₂-BCl₃ gases. The Ar etching in which no reactive ion-etching is anticipated exhibited the fastest etching rate. Wet etching was also performed using a ZrOCl₂-HCl etching soln. The etching rate was extremely fast compared with those of dry etching. In this etching, however, undesirable side-etching occurred. At the present stage, therefore, the most preferable etching processing is dry etching by an Ar gas.

IT 75-73-0, Carbon tetrafluoride CF₄

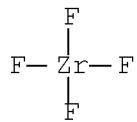
(etching gas; plasma-enhanced CVD prepn. and dry plasma etching processing of planar thin films of Pr³⁺-doped fluorozirconate glass)

RN 75-73-0 HCA

CN Methane, tetrafluoro- (CA INDEX NAME)



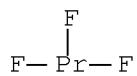
IT 7783-64-4P 7787-32-3P, Barium fluoride (BaF₂)
 13709-46-1P, Praseodymium fluoride (PrF₃)
 (glass, barium fluorozirconate; plasma-enhanced CVD prepn. and
 dry plasma etching processing of planar thin films of Pr³⁺-doped
 fluorozirconate glass)
 RN 7783-64-4 HCA
 CN Zirconium fluoride (ZrF₄), (T-4)- (CA INDEX NAME)



RN 7787-32-8 HCA
 CN Barium fluoride (BaF₂) (CA INDEX NAME)

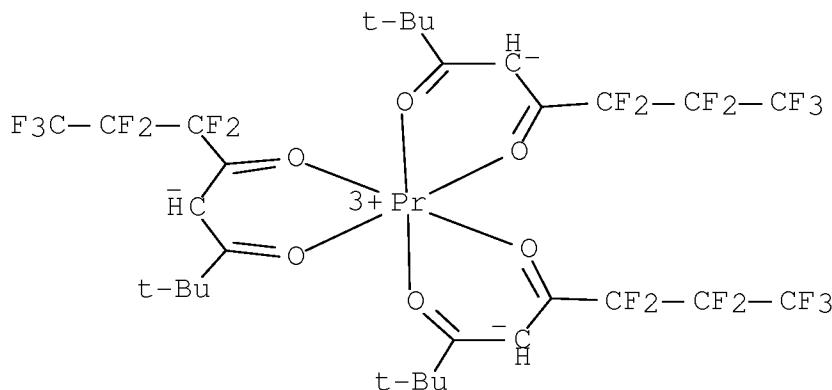


RN 13709-46-1 HCA
 CN Praseodymium fluoride (PrF₃) (CA INDEX NAME)



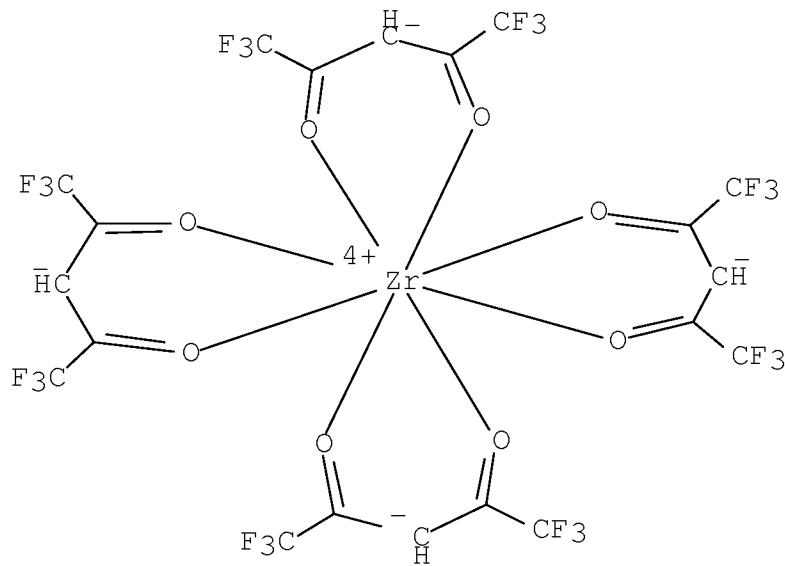
IT 17978-77-7 19530-02-0
 (precursor; plasma-enhanced CVD prepn. and dry plasma etching
 processing of planar thin films of Pr³⁺-doped fluorozirconate
 glass)
 RN 17978-77-7 HCA
 CN Praseodymium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-

octanedionato- κ 03, κ 05)- (CA INDEX NAME)



RN 19530-02-0 HCA

CN Zirconium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato- κ O, κ O')-, (SA-8-11'1'1''1''1'''1''')- (9CI) (CA INDEX NAME)



CC 57-1 (Ceramics)

Section cross-reference(s): 65

IT 75-73-0, Carbon tetrafluoride CF4 2551-62-4, Sulfur fluoride (SF6), (OC-6-11)- 7440-37-1, Argon, uses 7782-50-5,

Chlorine, uses 10294-34-5, Borane, trichloro-
(etching gas; plasma-enhanced CVD prepn. and dry plasma etching
processing of planar thin films of Pr³⁺-doped fluorozirconate
glass)

IT 7783-64-4P 7787-32-8P, Barium fluoride (BaF₂)
13709-46-1P, Praseodymium fluoride (PrF₃)
(glass, barium fluorozirconate; plasma-enhanced CVD prepn. and
dry plasma etching processing of planar thin films of Pr³⁺-doped
fluorozirconate glass)

IT 7783-54-2, Nitrogen fluoride (NF₃) 17978-77-7
19530-02-0 134316-23-7
(precursor; plasma-enhanced CVD prepn. and dry plasma etching
processing of planar thin films of Pr³⁺-doped fluorozirconate
glass)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 3 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 132:153753 HCA Full-text

TI Fluid storage and dispensing vessel with modified high
surface area solid as fluid storage medium

IN Tom, Glenn M.; Brown, Duncan W.

PA Advanced Technology Materials, Inc., USA

SO U.S., 11 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6027547	A	20000222	US 1998-80536	199805 18

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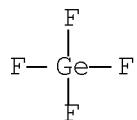
PRAI US 1997-46781P P 19970516 <--

AB A fluid storage and dispensing system comprises a fluid storage and
dispensing vessel constructed and arranged for selective dispensing
of fluid therefrom; a solid-phase support in the vessel; and an
affinity medium on the solid-phase support, wherein the affinity
medium reversibly takes up the fluid when contacted therewith, and
from which the fluid is disengagable under dispensing conditions. The
affinity medium may be a liq., oil, gel, or solid (porous solid, thin
film solid, or bulk solid). The system of the invention may be
employed for the storage and dispensing of fluids such as hydride,
halide and dopant gases for manufg. of semiconductor products. PVA,
polyvinylamine, divinylbenzene.

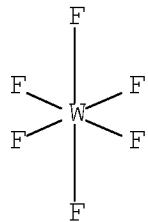
IT 7664-39-3, Hydrogen fluoride, uses
7783-58-6, Germanium tetrafluoride 7783-82-6,
Tungsten hexafluoride 14781-45-4
(fluid storage and dispensing vessel with modified high
surface area solid as fluid storage medium)
RN 7664-39-3 HCA
CN Hydrofluoric acid (CA INDEX NAME)

HF

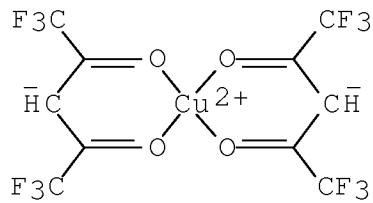
RN 7783-58-6 HCA
CN Germane, tetrafluoro- (CA INDEX NAME)



RN 7783-82-6 HCA
CN Tungsten fluoride (WF6), (OC-6-11)- (CA INDEX NAME)



RN 14781-45-4 HCA
CN Copper, bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-
κO2,κO4)-, (SP-4-1)- (CA INDEX NAME)



IC ICM B01D053-04

INCL 095096000

CC 47-7 (Apparatus and Plant Equipment)

Section cross-reference(s): 76

IT Waxes

(carbonaceous; fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)

IT Silanes

(chloro; fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)

IT Fluids

Gases

Liquids

Materials handling

Semiconductor device fabrication

Solids

Storage

(fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)

IT Halides

Hydrides

Polysiloxanes, uses

Silanes

(fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)

IT 67-63-0, Isopropanol, uses 71-55-6, 1,1,1-Trichloroethane

75-24-1, Trimethylaluminum 78-10-4, Tetraethylorthosilicate

78-10-4D, Tetraethylorthosilicate, fluorinated derivs. 78-40-0,

Triethylphosphate 97-94-9, Triethylborane 121-43-7,

Trimethylborate 121-45-9, Trimethylphosphite 122-52-1,

Triethylphosphite 150-46-9, Triethylborate 156-60-5,

trans-1,2-Dichloroethene 512-56-1, Trimethylphosphate 546-68-9,

Titaniumisopropoxide 556-67-2, Octamethylcyclotetrasiloxane

593-90-8, Trimethylborane 594-10-5, Trimethylantimony 754-05-2,

Vinyl trimethylsilane 1445-79-0, Trimethylgallium 1590-87-0,

Disilane 3275-24-9, Tetrakisdimethylamidotitanium 3385-78-2,

Trimethylindium 4419-47-0, Tetrakisdiethylamidotitanium
7550-45-0, Titanium tetrachloride, uses 7647-01-0, Hydrogen
chloride, uses 7664-39-3, Hydrogen
fluoride, uses 7664-41-7, Ammonia, uses 7719-12-2,
Phosphorous trichloride 7782-50-5, Chlorine, uses 7782-65-2,
Germane 7783-06-4, Hydrogen sulfide, uses 7783-07-5, Hydrogen
selenide 7783-09-7, Hydrogen telluride 7783-54-2, Nitrogen
trifluoride 7783-58-6, Germanium tetrafluoride
7783-61-1, Silicon tetrafluoride 7783-82-6, Tungsten
hexafluoride 7784-42-1, Arsine 7803-51-2, Phosphine 7803-52-3,
Stibine 10025-78-2, Trichlorosilane 10034-85-2, Hydrogen iodide
10035-10-6, Hydrogen bromide, uses 10294-34-5, Boron trichloride
13283-31-3, Borane, uses 13463-40-6, Iron pentacarbonyl
14781-45-4 19287-45-7, Diborane 19824-59-0 20396-66-1,
Boron deuteride (b2d6) 55161-66-5, Pentakisdiethylamidotantalum
62350-91-8, Dimethylaluminum hydroxide
(fluid storage and dispensing vessel with modified high
surface area solid as fluid storage medium)

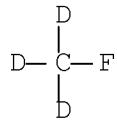
RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 4 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 129:136208 HCA Full-text
TI Formation of Grignard Species from the Reaction of Methyl Halides
with Laser-Ablated Magnesium Atoms. A Matrix Infrared Study of
CH₃MgF, CH₃MgCl, CH₃MgBr, and CH₃MgI
AU Bare, William D.; Andrews, Lester
CS Department of Chemistry, University of Virginia, Charlottesville,
VA, 22901, USA
SO Journal of the American Chemical Society (1998), 120(29),
7293-7301
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB Mg atoms generated by laser ablation were reacted with Me halides
dild. (0.5% to 0.1%) in Ar. Reaction products were trapped in a
cryogenic Ar matrix and analyzed by IR spectroscopy. The primary
reaction product, isolated Grignard mol. CH₃MgX, and the secondary
reaction products MgX, MgX₂, MgH, MgH₂, CH₄, C₂H₆, CH₂X, CH₃MgCH₃,
XMgCH₂, HMgCH₃, and HMgCH₂X were identified by isotopic (13C, D, and
26Mg) substitution and by correlation with B3LYP and BP86 isotopic
frequency calcns. This study reports the 1st exptl. evidence for the
fluoride Grignard species, CH₃MgF. IR absorptions were also obsd.
for assocd. Grignard species.
IT 558-21-4 593-53-3, Methyl fluoride
20666-44-8

(formation of Grignard species from reaction of Me halides with laser-ablated magnesium atoms)

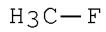
RN 558-21-4 HCA

CN Methane-d3, fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



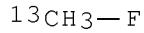
RN 593-53-3 HCA

CN Methane, fluoro- (CA INDEX NAME)



RN 20666-44-8 HCA

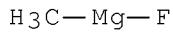
CN Methane-13C, fluoro- (8CI, 9CI) (CA INDEX NAME)



IT 420-09-7P, Methylmagnesium fluoride 7783-40-6P,
Magnesium difluoride 14953-28-7P, Magnesium fluoride (MgF)
210641-06-8P
(formation of Grignard species from reaction of Me halides with
laser-ablated magnesium atoms)

RN 420-09-7 HCA

CN Magnesium, fluoromethyl- (8CI, 9CI) (CA INDEX NAME)



RN 7783-40-6 HCA

CN Magnesium fluoride (MgF₂) (CA INDEX NAME)



RN 14953-28-7 HCA
CN Magnesium fluoride (MgF) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

F—Mg

RN 210641-06-8 HCA
CN Magnesium, (fluoromethyl)hydro- (9CI) (CA INDEX NAME)

F—CH₂—MgH

CC 29-3 (Organometallic and Organometalloidal Compounds)
IT 74-83-9, Methyl bromide, reactions 74-87-3, Methyl chloride,
reactions 74-88-4, Methyl iodide, reactions 558-21-4
593-53-3, Methyl fluoride 1111-88-2 7439-95-4,
Magnesium, reactions 20666-44-8
(formation of Grignard species from reaction of Me halides with
laser-ablated magnesium atoms)
IT 75-16-1P, Methylmagnesium bromide 420-09-7P,
Methylmagnesium fluoride 676-58-4P, Methylmagnesium chloride
917-64-6P, Methylmagnesium iodide 2999-74-8P, Dimethylmagnesium
7783-40-6P, Magnesium difluoride 7786-30-3P, Magnesium
dichloride, preparation 14953-28-7P, Magnesium fluoride
(MgF) 14989-29-8P, Magnesium monochloride 25382-52-9P,
Methylenemagnesium 63533-51-7P, Hydromethylmagnesium
210641-06-8P 210641-11-5P
(formation of Grignard species from reaction of Me halides with
laser-ablated magnesium atoms)

RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 5 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 120:91462 HCA Full-text
TI Vapor phase preparation of barium compound thin film from organic
barium compound
IN Sugawara, Shungo; Sato, Koji
PA Nippon Telegraph & Telephone, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05208818	A	19930820	JP 1992-14816	19920130

<--

PRAI JP 1992-14816 19920130 <--

OS MARPAT 120:91462

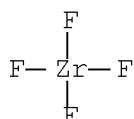
AB The film is prep'd. by heat decompn. of Ba complexes of diketone R1CSCH₂COR₂ (R1 = Me, CHMe₂, CMe₃; R2 = C1-8 fluoroalkyl). Ba-Zr or Ba-Y compd. thin film may be formed by adding Zr compd. or Y compd. to a vapor deposition material. HF may be used to form a BaF₂ thin film. Ba Ti oxide dielec. film or Ba Y Cu oxide superconductor thin film may be prep'd. in the method.

IT 7783-64-4, Zirconium fluoride (ZrF₄)

(barium fluoride glass film contg., vapor phase prepn. of)

RN 7783-64-4 HCA

CN Zirconium fluoride (ZrF₄), (T-4) - (CA INDEX NAME)



IT 7787-32-8P, Barium fluoride

(prepn. of, film, vapor phase, from barium compd.)

RN 7787-32-8 HCA

CN Barium fluoride (BaF₂) (CA INDEX NAME)



IT 7664-39-3, Hydrofluoric acid, properties

18716-26-2 19186-73-3 19530-02-0,

Tetrakis(hexafluoroacetylacetato)zirconium

(vapor deposition source, with barium compd., functional film from)

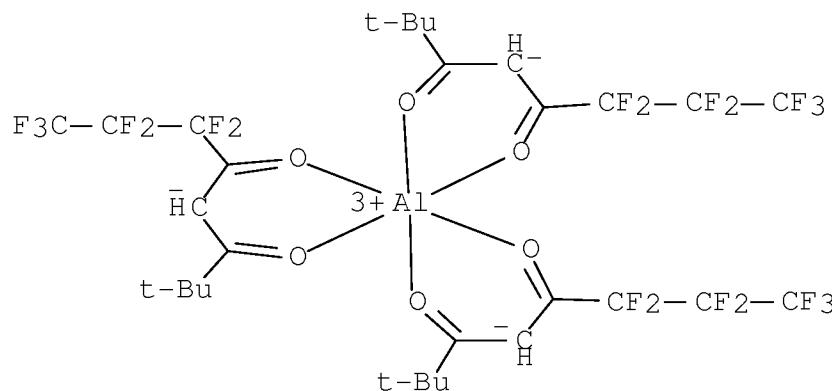
RN 7664-39-3 HCA

CN Hydrofluoric acid (CA INDEX NAME)

HF

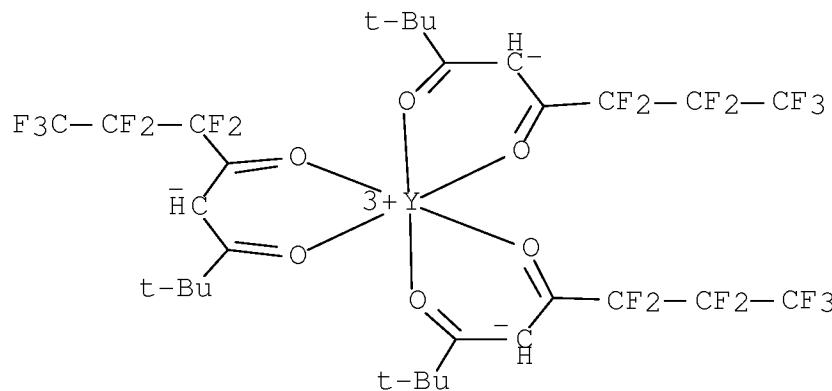
RN 18716-26-2 HCA

CN Aluminum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



RN 19186-73-3 HCA

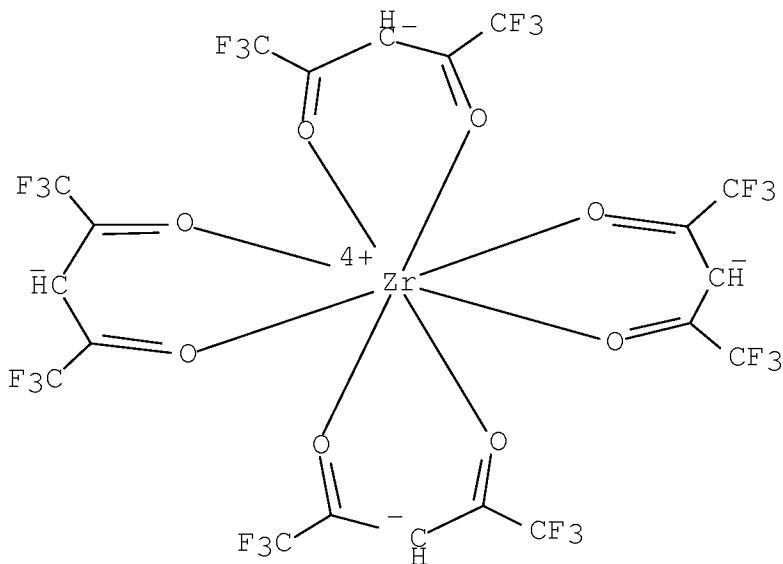
CN Yttrium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



RN 19530-02-0 HCA

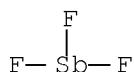
CN Zirconium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-

$\kappa O, \kappa O')$ -, (SA-8-11'1'1''1''1'''11''')- (9CI) (CA INDEX
NAME)

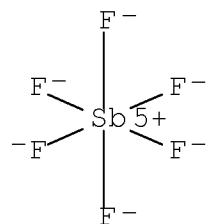


IC ICM C01G025-00
IC S C01G023-00; G02B006-00
CC 75-1 (Crystallography and Liquid Crystals)
Section cross-reference(s): 57, 76
IT 7783-64-4, Zirconium fluoride (ZrF4)
 (barium fluoride glass film contg., vapor phase prepn. of)
IT 7787-32-8P, Barium fluoride 12047-27-7P, Barium titanate,
preparation 65107-47-3P, Barium copper lanthanum oxide
107539-20-8P, Barium copper yttrium oxide
 (prepn. of, film, vapor phase, from barium compd.)
IT 546-68-9, Titanium tetraisopropoxide 7664-39-3,
Hydrofluoric acid, properties 14040-05-2,
Bis(dipivaloylmethanato)copper 14319-13-2,
Tris(dipivaloylmethanato)lanthanum 18716-26-2
19186-73-3 19530-02-0,
Tetrakis(hexafluoroacetylacetonato)zirconium 22466-49-5
121012-90-6, Bis(hexafluoroacetylacetonato)calcium
 (vapor deposition source, with barium compd., functional film
from)
L47 ANSWER 6 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 118:115581 HCA Full-text
TI Synthesis and characterization of chlorofluoroantimonates(V)
AU Dove, Michael F. A.; Sanders, Jeremy C. P.

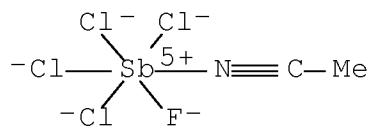
CS Dep. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK
 SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1992), (23), 3311-16
 CODEN: JCDTBI; ISSN: 0300-9246
 DT Journal
 LA English
 AB Five of the 8 possible $SbCl_{16-x}Fx^-$ ($x = 1-5$) were characterized in soln. by ^{121}Sb and ^{19}F NMR spectroscopy; of these 3 were isolated in $\geq 90\%$ purity as their tetraalkylammonium salts and their IR and Raman spectra are assigned. None of the 3 trans isomers were detected either in soln. or in the solid state. Factors influencing the appearance of the ^{121}Sb NMR spectra of octahedral $SbCl_{16-x}Fx^-$ are discussed. The solvolysis of $SbCl_{16-}$ by anhyd. HF is irreversible and generates all possible stoichiometries of $SbCl_{16-x}Fx^-$ in succession.
 IT 7783-56-4, Antimony trifluoride
 (chlorination of tetraethylammonium chloride mixed with)
 RN 7783-56-4 HCA
 CN Stibine, trifluoro- (CA INDEX NAME)



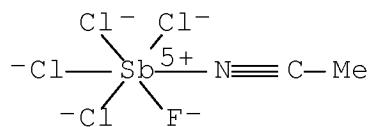
IT 17111-95-4P, Hexafluoroantimonate(1-)
 (formation and antimony-121 and fluorine-19 NMR of)
 RN 17111-95-4 HCA
 CN Antimonate(1-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



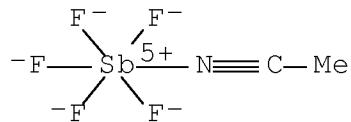
IT 58375-77-2P 58407-52-6P
 (prepn. of)
 RN 58375-77-2 HCA
 CN Antimony, (acetonitrile)tetrachlorofluoro-, (OC-6-11)- (CA INDEX NAME)



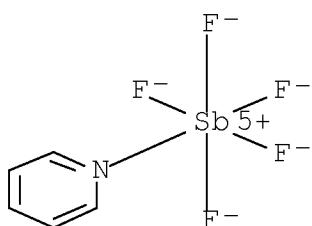
RN 58407-52-6 HCA
 CN Antimony, (acetonitrile)tetrachlorofluoro-, (OC-6-32)- (CA INDEX NAME)



IT 19106-78-6, (Acetonitrile)pentafluoroantimony
 93543-48-7
 (reaction of, with tetraethylammonium chloride)
 RN 19106-78-6 HCA
 CN Antimony, (acetonitrile)pentafluoro-, (OC-6-21)- (CA INDEX NAME)



RN 93543-48-7 HCA
 CN Antimony, pentafluoro(pyridine)-, (OC-6-21)- (CA INDEX NAME)



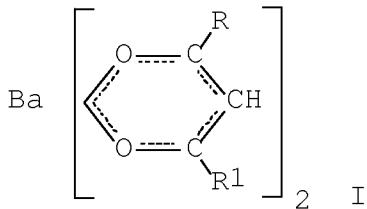
IT 7664-39-3, Hydrofluoric acid, reactions
(solvolysis by, of hexachloroantimonate salts)
RN 7664-39-3 HCA
CN Hydrofluoric acid (CA INDEX NAME)

HF

CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 77
IT Solvolysis
(of chloroantimonate(V) in hydrofluoric acid)
IT 7783-56-4, Antimony trifluoride
(chlorination of tetraethylammonium chloride mixed with)
IT 17111-95-4P, Hexafluoroantimonate(1-) 44479-94-9P
61061-85-6P, cis-Tetrachlorodifluoroantimonate(1-)
(formation and antimony-121 and fluorine-19 NMR of)
IT 16871-78-6P
(prepn. and solvolysis in hydrofluoric acid
and reaction of, with fluoro analog)
IT 58375-77-2P 58407-52-6P
(prepn. of)
IT 14913-58-7, Antimony chloride fluoride (SbCl4F) 19106-78-6
, (Acetonitrile)pentafluoroantimony 93543-43-7
(reaction of, with tetraethylammonium chloride)
IT 7664-39-3, Hydrofluoric acid, reactions
(solvolysis by, of hexachloroantimonate salts)
IT 55831-70-4
(solvolysis of, in hydrofluoric acid)

L47 ANSWER 7 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 111:238376 HCA Full-text
TI Manufacture of fluoride glass and fluoride glass optical fiber
preforms
IN Fujiura, Kazuo; Ohishi, Yasutake; Fujiki, Michiya; Kanamori,
Terutoshi; Takahashi, Shiro
PA Nippon Telegraph and Telephone Corp., Japan
SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
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PI	EP 331483	A2	19890906	EP 1989-302073	
					198903
					02
				<--	
	EP 331483	A3	19900816		
	EP 331483	B1	19930512		
	R: FR, GB				
	JP 02275726	A	19901109	JP 1989-49277	
					198903
					01
				<--	
	US 5071460	A	19911210	US 1989-317679	
					198903
					01
				<--	
	US 5145508	A	19920908	US 1991-684070	
					199103
					11
				<--	
PRAI	JP 1988-49797	A	19880304	<--	
	JP 1988-276007	A	19881102	<--	
	JP 1989-16403	A	19890127	<--	
	JP 1989-49277	A	19890301	<--	
	US 1989-317679	A1	19890301	<--	
OS	MARPAT 111:238376				
GI					



AB In the title process, comprising introducing a gaseous mixt. into a reaction system contg. a substrate and reacting the ingredients in the gaseous phase or on the substrate to deposit a metal fluoride and forming the fluoride glass, the gaseous mixts. contain a Ba β -diketonate I serving as a 1st starting material (R = C1-7-alkyl; R1 = substituted alkyl having general formula C_nF_{2n+1} ; n = 1-3), a gaseous or vaporizable compd. of the metallic element constituting the

fluoride glass and serving as the 2nd starting material, and optionally, a F-contg. gas serving as the fluorinating agent. The rod-shaped substrates, comprising a coating of finely divided fluoride glass, are heated to form the optical fiber preforms. The resulting fluoride glass is highly homogeneous and is useful for the manuf. of laser glass, coatings, lenses, and long optical fibers having low transmission loss. Thus, using vaporized hexafluoroacetylacetone Zr complex at 100 mL/min and 2,2-dimethyl-6,6,7,7,8,8,8-heptafluoro-3,5-octanedione Ba complex at 50 mL/min and HF(g), fluoride glass having compn. 65ZrF₄-35BaF₂ was deposited at 205° and 10 mm Hg. The glass had glass transition temp. 270 and crystn. temp. 330°.

IT 7664-39-3, Hydrogen fluoride, uses and
miscellaneous
(fluorinating agent, in optical fiber preform manuf.)
RN 7664-39-3 HCA
CN Hydrofluoric acid (CA INDEX NAME)

HF

IT 7782-64-1P, Manganese fluoride (MnF₂) 7783-46-2P,
Lead fluoride (PbF₂) 7783-49-5P, Zinc fluoride (ZnF₂)
7783-52-0P, Indium fluoride (InF₃) 7783-56-4P
7783-63-3P 7783-64-4P, Zirconium fluoride (ZrF₄)
7783-68-8P 7783-71-3P, Tantalum fluoride (TaF₅)
7784-18-1P, Aluminum fluoride (AlF₃) 15978-96-8P
55128-73-9P, Tin fluoride 113016-54-9P, Molybdenum
fluoride 7681-49-4P, Sodium fluoride (NaF), uses and
miscellaneous 7753-88-5P, Cerium fluoride (CeF₃)
7789-24-4P, Lithium fluoride (LiF), uses and miscellaneous
7789-75-5P, Calcium fluoride (CaF₂), uses and miscellaneous
7790-79-6P, Cadmium fluoride (CdF₂) 13569-80-7P,
Dysprosium fluoride (DyF₃) 13708-63-9P, Terbium fluoride
(TbF₃) 13709-38-1P, Lanthanum fluoride (LaF₃)
13709-42-7P, Neodymium fluoride (NdF₃) 13709-45-0P
, Promethium fluoride (PmF₃) 13709-46-1P, Praseodymium
fluoride (PrF₃) 13709-49-4P, Yttrium fluoride (YF₃)
13709-52-9P, Hafnium fluoride (HfF₄) 13709-59-6P
13760-78-6P, Holmium fluoride (HoF₃) 13760-79-7P,
Thulium fluoride (TmF₃) 13760-80-0P, Ytterbium fluoride
(YbF₃) 13760-81-1P, Lutetium fluoride (LuF₃)
13760-83-3P, Erbium fluoride (ErF₃) 13765-24-7P,
Samarium fluoride (SmF₃) 13765-25-8P, Europium fluoride
(EuF₃) 13765-26-9P, Gadolinium fluoride (GdF₃)

(glass, optical, barium fluoride, fluorine-substituted
β-diketone barium complexes in manuf. of)

RN 7782-64-1 HCA

CN Manganese fluoride (MnF₂) (CA INDEX NAME)

F—Mn—F

RN 7783-46-2 HCA

CN Lead fluoride (PbF₂) (CA INDEX NAME)

F—Pb—F

RN 7783-49-5 HCA

CN Zinc fluoride (ZnF₂) (CA INDEX NAME)

F—Zn—F

RN 7783-52-0 HCA

CN Indium fluoride (InF₃) (CA INDEX NAME)

F
|
F—In—F

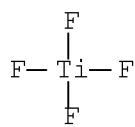
RN 7783-56-4 HCA

CN Stibine, trifluoro- (CA INDEX NAME)

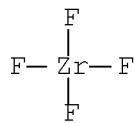
F
|
F—Sb—F

RN 7783-63-3 HCA

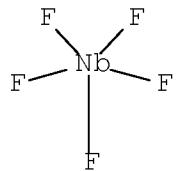
CN Titanium fluoride (TiF₄), (T-4)- (9CI) (CA INDEX NAME)



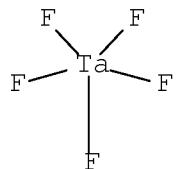
RN 7783-64-4 HCA
CN Zirconium fluoride (ZrF₄), (T-4)- (CA INDEX NAME)



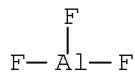
RN 7783-68-8 HCA
CN Niobium fluoride (NbF₅), (TB-5-11)- (CA INDEX NAME)



RN 7783-71-3 HCA
CN Tantalum fluoride (TaF₅) (CA INDEX NAME)



RN 7784-18-1 HCA
CN Aluminum fluoride (AlF₃) (CA INDEX NAME)



RN 15978-96-8 HCA
 CN Bismuth(1+), difluoro- (9CI) (CA INDEX NAME)



RN 55128-73-9 HCA
 CN Tin fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Sn	x	7440-31-5

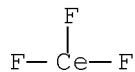
RN 113016-54-9 HCA
 CN Molybdenum fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Mo	x	7439-98-7

RN 7681-49-4 HCA
 CN Sodium fluoride (NaF) (CA INDEX NAME)



RN 7758-88-5 HCA
 CN Cerium fluoride (CeF₃) (CA INDEX NAME)



RN 7789-24-4 HCA
CN Lithium fluoride (LiF) (CA INDEX NAME)

F—Li

RN 7789-75-5 HCA
CN Calcium fluoride (CaF₂) (CA INDEX NAME)

F—Ca—F

RN 7790-79-6 HCA
CN Cadmium fluoride (CdF₂) (CA INDEX NAME)

F—Cd—F

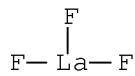
RN 13569-80-7 HCA
CN Dysprosium fluoride (DyF₃) (CA INDEX NAME)

F
|
F—Dy—F

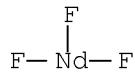
RN 13708-63-9 HCA
CN Terbium fluoride (TbF₃) (CA INDEX NAME)

F
|
F—Tb—F

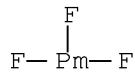
RN 13709-38-1 HCA
CN Lanthanum fluoride (LaF₃) (CA INDEX NAME)



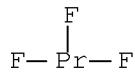
RN 13709-42-7 HCA
CN Neodymium fluoride (NdF₃) (CA INDEX NAME)



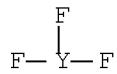
RN 13709-45-0 HCA
CN Promethium fluoride (PmF₃) (7CI, 8CI, 9CI) (CA INDEX NAME)



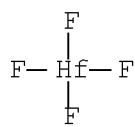
RN 13709-46-1 HCA
CN Praseodymium fluoride (PrF₃) (CA INDEX NAME)



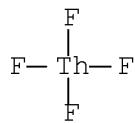
RN 13709-49-4 HCA
CN Yttrium fluoride (YF₃) (CA INDEX NAME)



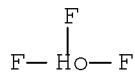
RN 13709-52-9 HCA
CN Hafnium fluoride (HfF₄), (T-4)- (CA INDEX NAME)



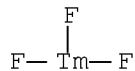
RN 13709-59-6 HCA
CN Thorium fluoride (ThF₄), (T-4)- (CA INDEX NAME)



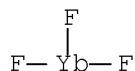
RN 13760-78-6 HCA
CN Holmium fluoride (HoF₃) (CA INDEX NAME)



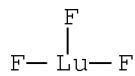
RN 13760-79-7 HCA
CN Thulium fluoride (TmF₃) (CA INDEX NAME)



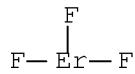
RN 13760-80-0 HCA
CN Ytterbium fluoride (YbF₃) (CA INDEX NAME)



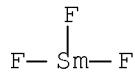
RN 13760-81-1 HCA
CN Lutetium fluoride (LuF₃) (CA INDEX NAME)



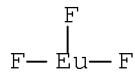
RN 13760-83-3 HCA
CN Erbium fluoride (ErF₃) (CA INDEX NAME)



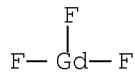
RN 13765-24-7 HCA
CN Samarium fluoride (SmF₃) (CA INDEX NAME)



RN 13765-25-8 HCA
CN Europium fluoride (EuF₃) (CA INDEX NAME)



RN 13765-26-9 HCA
CN Gadolinium fluoride (GdF₃) (CA INDEX NAME)



IT 7787-32-8P, Barium fluoride (BaF₂)
(glass, optical, fluorine-substituted β -diketone barium
complexes in manuf. of)
RN 7787-32-8 HCA

CN Barium fluoride (BaF₂) (CA INDEX NAME)

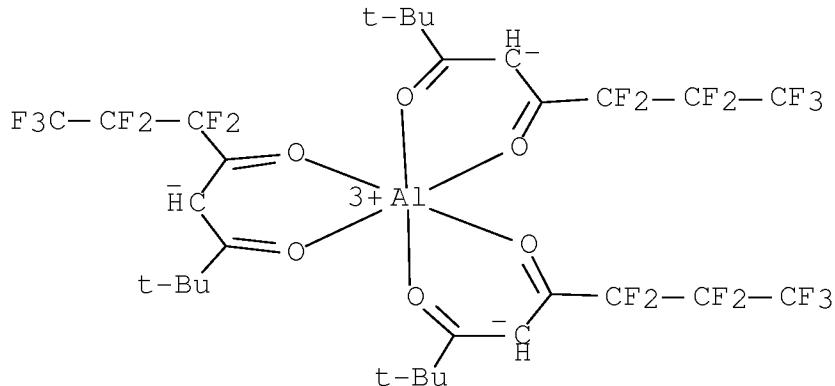
F—Ba—F

IT 18716-26-2 19106-89-9 19186-73-3
19530-02-0 22413-70-3

(vapors contg. fluorine-substituted β -diketone barium complexes and, in optical fluoride glass manuf. by chem.-vapor deposition)

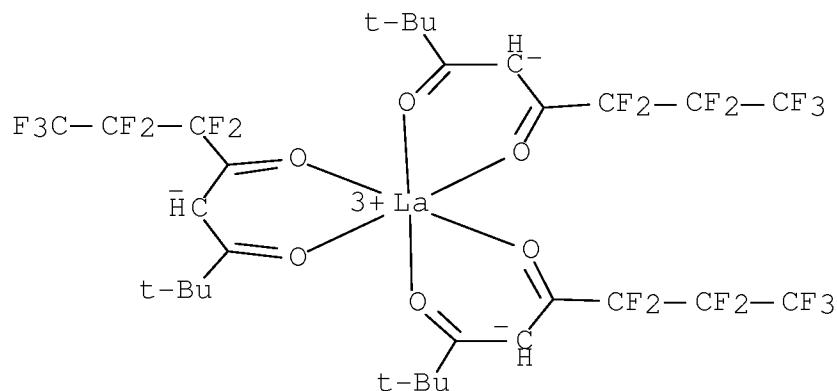
RN 18716-26-2 HCA

CN Aluminum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



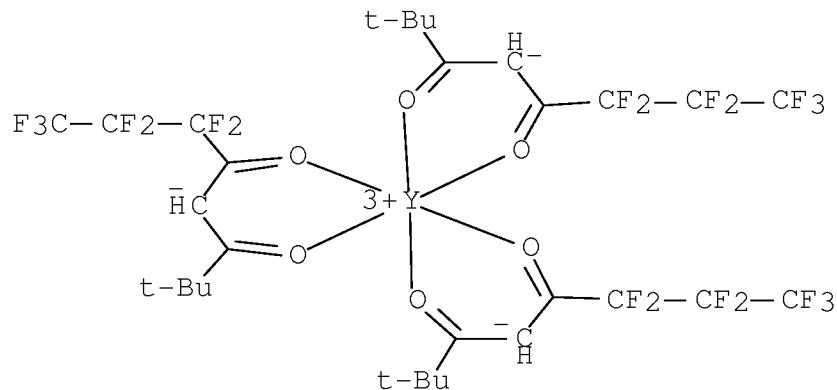
RN 19106-89-9 HCA

CN Lanthanum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- κ O, κ O')- (9CI) (CA INDEX NAME)



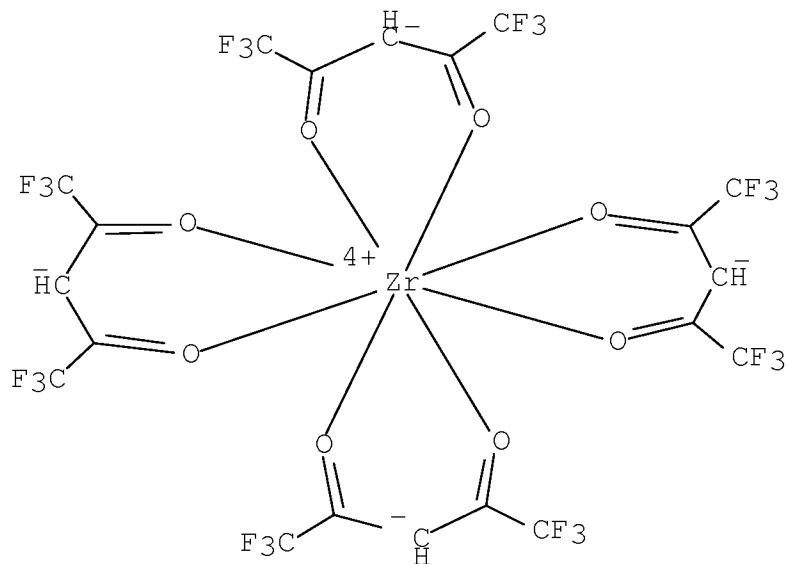
RN 19186-73-3 HCA

CN Yttrium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato-κO,κO')- (9CI) (CA INDEX NAME)



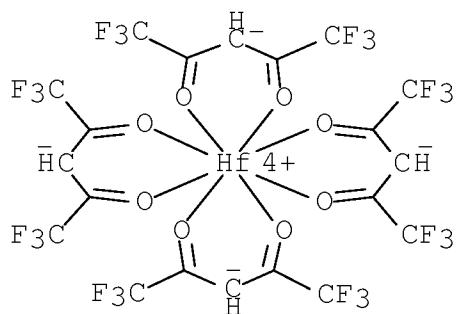
RN 19530-02-0 HCA

CN Zirconium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-κO,κO')-, (SA-8-11'1'1''1''1''11'')- (9CI) (CA INDEX NAME)



RN 22413-70-3 HCA

CN Hafnium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-0,0')- (9CI) (CA INDEX NAME)



IC ICM C03C001-00

ICS C03C013-04; C03C003-32; C03B037-018

CC 57-1 (Ceramics)

IT 7664-39-3, Hydrogen fluoride, uses and
miscellaneous 7782-41-4, Fluorine, uses and miscellaneous
(fluorinating agent, in optical fiber preform manuf.)

IT 7782-64-1P, Manganese fluoride (MnF2) 7783-46-2P,
Lead fluoride (PbF2) 7783-49-5P, Zinc fluoride (ZnF2)

7783-52-0P, Indium fluoride (InF3) 7783-56-4P

7783-63-3P 7783-64-4P, Zirconium fluoride (ZrF4)

7783-68-8P 7783-71-3P, Tantalum fluoride (TaF₅)
7784-18-1P, Aluminum fluoride (AlF₃) 15978-96-8P
55128-73-9P, Tin fluoride 113016-54-9P, Molybdenum
fluoride 7681-49-4P, Sodium fluoride (NaF), uses and
miscellaneous 7758-88-5P, Cerium fluoride (CeF₃)
7789-24-4P, Lithium fluoride (LiF), uses and miscellaneous
7789-75-5P, Calcium fluoride (CaF₂), uses and miscellaneous
7790-79-6P, Cadmium fluoride (CdF₂) 13569-80-7P,
Dysprosium fluoride (DyF₃) 13708-63-9P, Terbium fluoride
(TbF₃) 13709-38-1P, Lanthanum fluoride (LaF₃)
13709-42-7P, Neodymium fluoride (NdF₃) 13709-45-0P
, Promethium fluoride (PmF₃) 13709-46-1P, Praseodymium
fluoride (PrF₃) 13709-49-4P, Yttrium fluoride (YF₃)
13709-52-9P, Hafnium fluoride (HfF₄) 13709-59-6P
13760-78-6P, Holmium fluoride (HoF₃) 13760-79-7P,
Thulium fluoride (TmF₃) 13760-80-0P, Ytterbium fluoride
(YbF₃) 13760-81-1P, Lutetium fluoride (LuF₃)
13760-83-3P, Erbium fluoride (ErF₃) 13765-24-7P,
Samarium fluoride (SmF₃) 13765-25-8P, Europium fluoride
(EuF₃) 13765-26-9P, Gadolinium fluoride (GdF₃)
(glass, optical, barium fluoride, fluorine-substituted
 β -diketone barium complexes in manuf. of)
IT 7767-32-8P, Barium fluoride (BaF₂)
(glass, optical, fluorine-substituted β -diketone barium
complexes in manuf. of)
IT 1522-22-1D, metal complexes 13777-25-8 18716-26-2
19106-89-9 19186-73-3 19530-02-0
22413-70-3 22441-13-0 22466-43-9 24347-13-5
124053-49-2
(vapors contg. fluorine-substituted β -diketone barium
complexes and, in optical fluoride glass manuf. by chem.-vapor
deposition)
L47 ANSWER 8 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 108:160332 HCA Full-text
OREF 108:26177a, 26180a
TI Preparation of the hexafluorotungstates(V) (NaWF₆ and
[Cd(CH₃CN)₆][WF₆]₂)
AU Brueckner, Angelika; Vogt, Hartmut; Riesel, Lothar
CS Sekt. Chem., Humboldt-Univ. Berlin, Berlin, DDR-1040, Ger. Dem. Rep.
SO Zeitschrift fuer Chemie (1987), 27(11), 415-16
CODEN: ZECEAL; ISSN: 0044-2402
DT Journal
LA German
AB WF₆ reacted with NaI in a Ni autoclave at 80° to give NaWF₆ which is
cubic, isotypic with NaMoF₆ with a₀ 818.1 pm. WF₆ reacted with
Cd(CF₃)₂.2MeCN in MeCN at 50° to give [Cd(MeCN)₆][WF₅]₂ (I). In this

latter reaction CF₃ radicals were formed which abstracted H from MeCN to give CHF₃. CdF₂ was also formed as a result of the reaction of CF₂ (formed in the decompn. of Cd(CF₃)₂.2MeCN) and CF₃ radicals with SiO₂ walls. It was characterized by IR spectra.

IT 7790-79-6P, Cadmium difluoride

(formation of, from cadmium trifluoromethyl acetonitrile complex and tungsten hexafluoride)

RN 7790-79-6 HCA

CN Cadmium fluoride (CdF₂) (CA INDEX NAME)

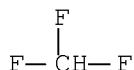
F—Cd—F

IT 75-46-7P, Trifluoromethane

(formation of, in reaction of cadmium trifluoromethyl acetonitrile complex with tungsten hexafluoride in acetonitrile)

RN 75-46-7 HCA

CN Methane, trifluoro- (CA INDEX NAME)

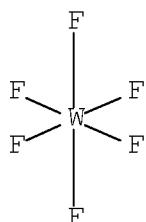


IT 7783-82-6, Tungsten hexafluoride

(reaction of, with sodium iodide and cadmium trifluoromethyl acetonitrile complex)

RN 7783-82-6 HCA

CN Tungsten fluoride (WF₆), (OC-6-11)- (CA INDEX NAME)



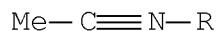
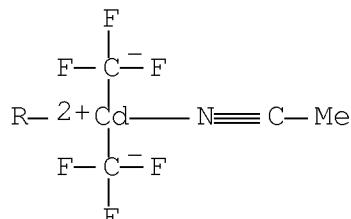
IT 93346-82-8

(reaction of, with tungsten hexafluoride)

RN 93346-82-8 HCA

CN Cadmium, bis(acetonitrile)bis(trifluoromethyl)-, (T-4)- (CA INDEX

NAME)



CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 75

IT 7790-79-6P, Cadmium difluoride
(formation of, from cadmium trifluoromethyl acetonitrile complex and tungsten hexafluoride)

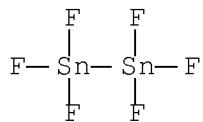
IT 75-46-7P, Trifluoromethane
(formation of, in reaction of cadmium trifluoromethyl acetonitrile complex with tungsten hexafluoride in acetonitrile)

IT 7783-82-6, Tungsten hexafluoride
(reaction of, with sodium iodide and cadmium trifluoromethyl acetonitrile complex)

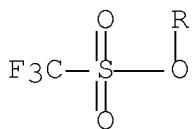
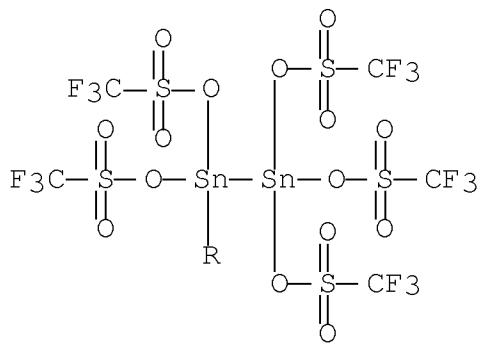
IT 93346-82-8
(reaction of, with tungsten hexafluoride)

L47 ANSWER 9 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 105:17024 HCA Full-text
OREF 105:2713a,2716a
TI The reaction of hexaphenylditin with inorganic acids: new mixed oxidation state compounds of tin
AU Birchall, T.; Johnson, J. P.; Manivannan, V.
CS Inst. Mater. Res., McMaster Univ., Hamilton, ON, L8S 4M1, Can.
SO Hyperfine Interactions (1986), 28(1-4), 685-8
CODEN: HYINDN; ISSN: 0304-3843
DT Journal
LA English
AB The solvolysis of Sn_2Ph_6 by a variety of inorg. acids ($\text{XH} = \text{HSO}_3\text{Z}$ ($\text{Z} = \text{OH, Me, Et, CF}_3, \text{F}$), HF) gave SnX_3 . Sn-119 Moessbauer spectroscopy shows that these compds. should be formulated as $\text{Sn(II)}\text{Sn(IV)}\text{X}_6$: in some of these compds. the nonbonding electron pair of the Sn(II) is stereochem. inactive.
IT 56089-53-3P 102856-92-8P
(prepn. and Moessbauer spectrum of)

RN 56089-53-3 HCA
CN Distannane, hexafluoro- (9CI) (CA INDEX NAME)



RN 102856-92-8 HCA
CN Tin, difluorohexakis(trifluoromethanesulfonato)tri- (9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 102606-73-5P
(prepn., Moessbauer spectrum and reaction of, with stannous fluoride)
RN 102606-73-5 HCA
CN 3,6-Dioxa-2,7-dithia-4,5-distannaoctane, 1,1,1,8,8,8-hexafluoro-4,4,5,5-tetrakis[[(trifluoromethyl)sulfonyl]oxy]-, 2,2,7,7-tetraoxide (9CI) (CA INDEX NAME)

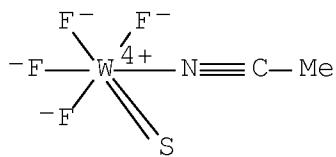


IT 7664-39-3, reactions
(solvolysis by, of hexaphenylditin, mixed valence salt by)
RN 7664-39-3 HCA
CN Hydrofluoric acid (CA INDEX NAME)

HF

CC 78-5 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 29
IT 56089-53-3P 102606-69-9P 102606-70-2P 102606-71-3P
102606-72-4P 102856-92-8P
(prepn. and Moessbauer spectrum of)
IT 102606-73-5P
(prepn., Moessbauer spectrum and reaction of, with stannous
fluoride)
IT 75-75-2 594-45-6 1493-13-6 7664-39-3, reactions
7664-93-9, reactions 7789-21-1
(solvolysis by, of hexaphenylditin, mixed valence salt by)

L47 ANSWER 10 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 100:60845 HCA Full-text
OREF 100:9161a,9164a
TI Synthesis, chemistry, and crystal structures of high-valent
transition-metal chalcogenide fluorides and their derivatives
AU Holloway, John H.; Kaucic, Venceslav; Russell, David R.
CS Dep. Chem., Univ. Leicester, Leicester, LE1 7RH, UK
SO Journal of the Chemical Society, Chemical Communications (1983), (19), 1079-81
CODEN: JCCCAT; ISSN: 0022-4936
DT Journal
LA English
AB Reaction of S with WF₆ and ReF₆, and Se with WF₆ at 300° for 20 h
gave WF₄S (I), ReF₄S (II), and WF₄Se (III), resp. Hydrolysis of III
gave HF and H₂Se. With MeCN, I and III gave WF₄S.MeCN (IV) and
WF₄Se.MeCN, and reaction of I with SbF₅ at 30-40° gave WF₄S.SbF₅.
The crystal structures of I, II, and IV were detd.; the results were
refined to R = 0.0738 for 598 reflections, R = 0.0500 for 1646
reflections, and R = 0.10 for 346 reflections, resp.
IT 88586-71-4P
(prepn. and structure of)
RN 88586-71-4 HCA
CN Tungsten, (acetonitrile)tetrafluorothioxo-, (OC-6-11)- (CA INDEX
NAME)

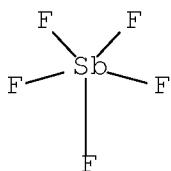


IT 7783-70-2DP, reaction products with tungsten tetrafluoride
sulfide 88586-72-5P

(prep. of)

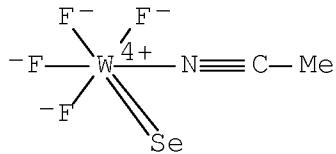
RN 7783-70-2 HCA

CN Antimony fluoride (SbF₅) (CA INDEX NAME)



RN 88586-72-5 HCA

CN Tungsten, (acetonitrile)tetrafluoroselenoxo- (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 75

IT 41831-80-5P 82271-42-9P 88586-71-4P

(prep. and structure of)

IT 7783-70-2DP, reaction products with tungsten tetrafluoride
sulfide 41831-80-5DP, reaction products with antimony
pentafluoride 88586-72-5P

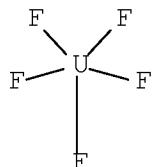
(prep. of)

I-47 ANSWER 11 OF 18 HCA COPYRIGHT 2008 ACS on STN

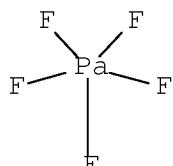
AN 97:228974 HCA Full-text

OREF 97:38179a, 38182a

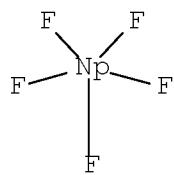
TI The preparation and some properties of actinide pentafluorides
 AU Brown, David; Whittaker, Brian; Berry, John A.; Holloway, John H.
 CS Chem. Div., At. Energy Res. Establ., Harwell/Oxon., OX11 0RA, UK
 SO Journal of the Less-Common Metals (1982), 86(1), 75-84
 CODEN: JCOMAH; ISSN: 0022-5088
 DT Journal
 LA English
 AB PaF₅ and NpF₅ were prep'd. by new methods and some of their phys. and chem. properties were studied to allow comparison with information available for UF₅. In contrast to UF₅, which is very sol. in MeCN, PaF₅ forms a sparingly sol. complex whereas NpF₅ neither dissolves nor reacts. The adduct PaF₅.2 Ph₃PO crystallizes on addn. of Ph₃PO to PaF₅ in MeCN and is isostructural with the U analog; NpF₅ again fails to form a complex. Unlike UF₅, NpF₅ does not undergo halogen exchange with Me₃SiCl in MeCN or with liq. BC₁₃. Preliminary studies of possible routes to PuF₅ showed that KrF₂ oxidn. of PuF₃ in anhyd. HF yields PuF₄ at room temp.
 IT 13775-07-0
 (crystal structure of)
 RN 13775-07-0 HCA
 CN Uranium fluoride (UF₅) (CA INDEX NAME)



IT 15192-29-7P 31479-18-2P
 (prepn. and crystal structure of)
 RN 15192-29-7 HCA
 CN Protactinium fluoride (PaF₅) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



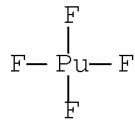
RN 31479-18-2 HCA
 CN Neptunium fluoride (NpF₅) (8CI, 9CI) (CA INDEX NAME)



IT 13709-56-3P 83779-09-3P 83789-64-4P
(prepn. of)

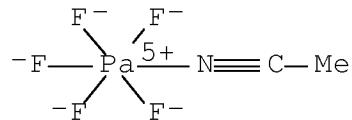
RN 13709-56-3 HCA

CN Plutonium fluoride (PuF₄) (6CI, 8CI, 9CI) (CA INDEX NAME)



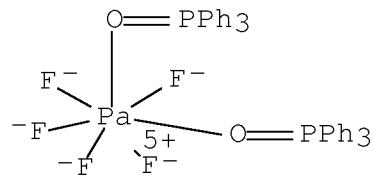
RN 83779-09-3 HCA

CN Protactinium, (acetonitrile)pentafluoro-, (OC-6-21)- (CA INDEX NAME)



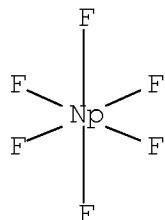
RN 83789-64-4 HCA

CN Protactinium, pentafluorobis(triphenylphosphine oxide-O)- (9CI) (CA INDEX NAME)

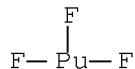


IT 14521-05-2

(reaction of, with iodine in presence of iodine pentafluoride)
RN 14521-05-2 HCA
CN Neptunium fluoride (NpF₆), (OC-6-11)- (9CI) (CA INDEX NAME)



IT 13842-83-6
(reaction of, with krypton difluoride)
RN 13842-83-6 HCA
CN Plutonium fluoride (PuF₃) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 78-5 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 75
IT 13775-07-0
(crystal structure of)
IT 15192-29-7P 31479-18-2P
(prepn. and crystal structure of)
IT 13709-56-3P 83779-09-3P 83789-64-4P
(prepn. of)
IT 14521-05-2
(reaction of, with iodine in presence of iodine pentafluoride)
IT 13842-83-6
(reaction of, with krypton difluoride)

L47 ANSWER 12 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 82:9754 HCA Full-text

OREF 82:1521a,1524a

TI Fluorine-19 NMR study of the tantalum ethoxyfluoro complexes
AU Buslaev, Yu. A.; Kokunov, Yu. V.; Kopanov, V. D.; Gustyakova, M. P.
CS Inst. Gen. Inorg. Chem., Moscow, USSR
SO Journal of Inorganic and Nuclear Chemistry (1974), 36(7),
1569-74

CODEN: JINCAO; ISSN: 0022-1902

DT Journal

LA English

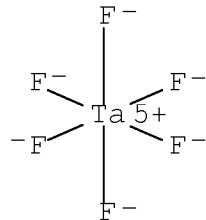
AB Complex formation in solns. of TaF₅, TaF₅-Ta(OEt)₅, and Ta(OEt)₅-HF in EtOH and MeCN was studied using ¹⁹F NMR spectroscopy. Neutral, anionic, and cationic complexes were found. Only the cis isomer was obsd. for [TaF₄(OEt)₂]⁻, but in neutral and cationic complexes contg. 2 F atoms, both cis and trans isomers were present.

IT 16918-70-0P 53708-81-9P 53708-82-0P
53708-83-1P 53708-84-2P 53708-85-3P
53708-86-4P 53708-87-5P 53708-88-6P
53708-89-7P 53730-30-6P 53730-31-7P
53730-32-8P 53730-33-9P 53730-34-0P
53797-14-1P 53829-77-9P

(formation and NMR of)

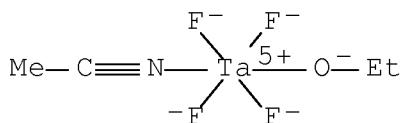
RN 16918-70-0 HCA

CN Tantalate(1-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



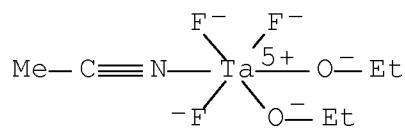
RN 53708-81-9 HCA

CN Tantalum, (acetonitrile)ethoxytetrafluoro-, (OC-6-11)- (CA INDEX NAME)

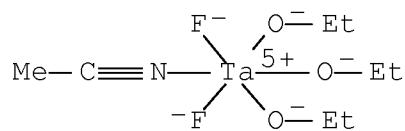


RN 53708-82-0 HCA

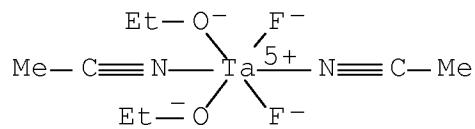
CN Tantalum, (acetonitrile)diethoxytrifluoro-, (OC-6-31)- (CA INDEX NAME)



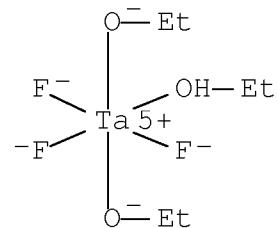
RN 53708-83-1 HCA
 CN Tantalum, (acetonitrile)triethoxydifluoro-, (OC-6-13)- (CA INDEX NAME)



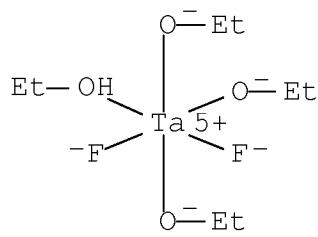
RN 53708-84-2 HCA
 CN Tantalum(1+), bis(acetonitrile)diethoxydifluoro- (CA INDEX NAME)



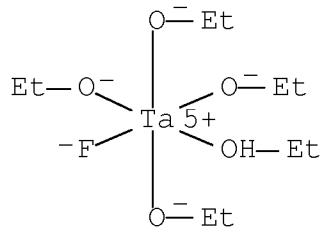
RN 53708-85-3 HCA
 CN Tantalum, (ethanol)diethoxytrifluoro-, (OC-6-21)- (CA INDEX NAME)



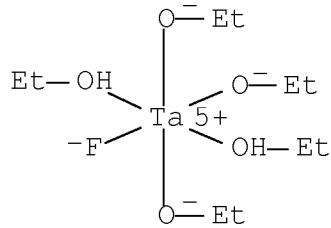
RN 53708-86-4 HCA
 CN Tantalum, (ethanol)triethoxydifluoro-, (OC-6-13)- (CA INDEX NAME)



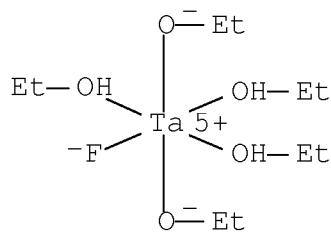
RN 53708-87-5 HCA
 CN Tantalum, (ethanol)tetraethoxyfluoro- (CA INDEX NAME)



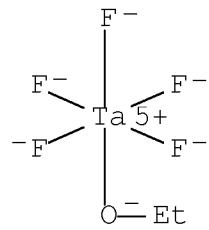
RN 53708-88-6 HCA
 CN Tantalum(1+), bis(ethanol)triethoxyfluoro- (CA INDEX NAME)



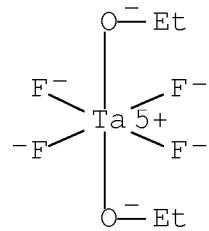
RN 53708-89-7 HCA
 CN Tantalum(2+), tris(ethanol)diethoxyfluoro- (CA INDEX NAME)



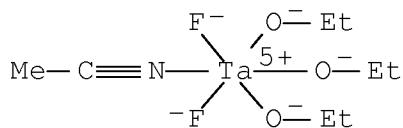
RN 53730-30-6 HCA
 CN Tantalate(1-), ethoxypentafluoro-, (OC-6-21)- (CA INDEX NAME)



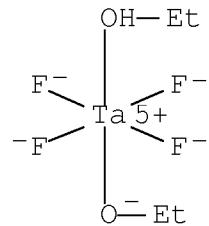
RN 53730-31-7 HCA
 CN Tantalate(1-), diethoxytetrafluoro-, (OC-6-22)- (CA INDEX NAME)



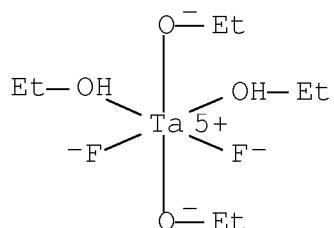
RN 53730-32-8 HCA
 CN Tantalum, (acetonitrile)triethoxydifluoro-, (OC-6-22)- (CA INDEX NAME)



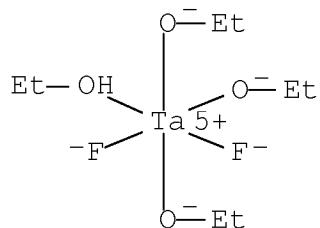
RN 53730-33-9 HCA
CN Tantalum, (ethanol)ethoxytetrafluoro-, (OC-6-11)- (CA INDEX NAME)



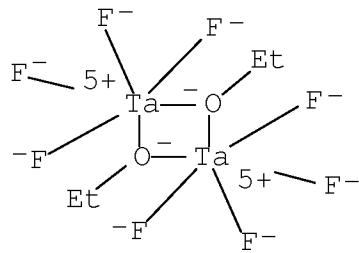
RN 53730-34-0 HCA
CN Tantalum(1+), bis(ethanol)diethoxydifluoro- (CA INDEX NAME)



RN 53797-14-1 HCA
CN Tantalum, (ethanol)triethoxydifluoro-, (OC-6-33)- (CA INDEX NAME)



RN 53829-77-9 HCA
CN Tantalum, di- μ -ethoxyoctafluorodi- (CA INDEX NAME)



CC 73-4 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)

Section cross-reference(s): 68

IT 16918-70-0P 53708-81-9P 53708-82-0P
 53708-83-1P 53708-84-2P 53708-85-3P
 53708-86-4P 53708-87-5P 53708-88-6P
 53708-89-7P 53730-30-6P 53730-31-7P
 53730-32-8P 53730-33-9P 53730-34-0P
 53797-14-1P 53829-77-9P

(formation and NMR of)

L47 ANSWER 13 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 78:167967 HCA Full-text

OREF 78:26890h, 26891a

TI Systematic preparation of carbonyl fluorides of molybdenum and tungsten using xenon difluoride as oxidant

AU O'Donnell, T. A.; Phillips, K. A.

CS Dep. Inorg. Chem., Univ. Melbourne, Parkville, Australia

SO Inorganic Chemistry (1973), 12(6), 1437-8

CODEN: INOCAJ; ISSN: 0020-1669

DT Journal

LA English

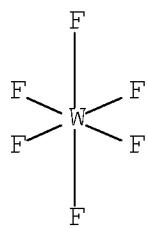
AB Mo(CO)4F2, prep'd. from Mo(CO)4Cl2 in HF, was oxidized by XeF2 to Mo(CO)3F3 and Mo(CO)2F4 which react further with XeF2 to give MoF6. Attempts to oxidize W(CO)4F2 to W(CO)3F3 and W(CO)2F4 led only to WF6 and WF5. The compns. of the Mo complexes were estd. by ir spectra.

IT 7783-82-6P 19357-83-6P

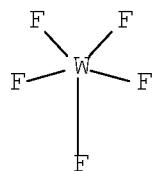
(formation of, in oxidn. of difluorotetracarbonyltungsten)

RN 7783-82-6 HCA

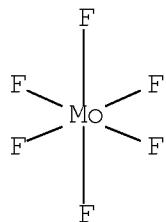
CN Tungsten fluoride (WF6), (OC-6-11)- (CA INDEX NAME)



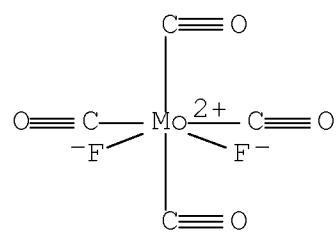
RN 19357-83-6 HCA
 CN Tungsten fluoride (WF5) (8CI, 9CI) (CA INDEX NAME)



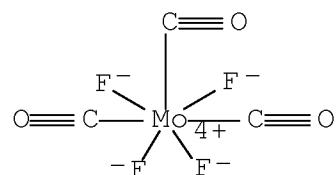
IT 7783-77-9P
 (formation of, in oxidn. of tetracarbonyldifluoromolybdenum)
 RN 7783-77-9 HCA
 CN Molybdenum fluoride (MoF6), (OC-6-11)- (CA INDEX NAME)



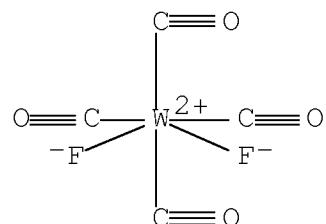
IT 38703-63-8P 38703-64-9P 38703-66-1P
 38708-79-1P
 (prepn. of)
 RN 38703-63-8 HCA
 CN Molybdenum, tetracarbonyldifluoro- (CA INDEX NAME)



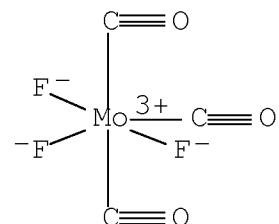
RN 38703-64-9 HCA
 CN Molybdenum, tricarbonyltetrafluoro- (CA INDEX NAME)



RN 38703-66-1 HCA
 CN Tungsten, tetracarbonyldifluoro- (CA INDEX NAME)



RN 38708-79-1 HCA
 CN Molybdenum, tricarbonyltrifluoro- (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)
IT 7783-82-6P 14040-11-0P 19357-83-6P
(formation of, in oxidn. of difluorotetracarbonyltungsten)
IT 7783-77-9P
(formation of, in oxidn. of tetracarbonyldifluoromolybdenum)
IT 38703-63-8P 38703-64-9P 38703-66-1P
38708-79-1P
(prepn. of)

L47 ANSWER 14 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 68:35488 HCA Full-text

OREF 68:6883a,6886a

TI Hydrolysis of titanium tetrafluoride

AU Buslaev, Yu. A.; Dyer, Daniel S.; Ragsdale, Ronald O.

CS Univ. of Utah, Salt Lake City, UT, USA

SO Inorganic Chemistry (1967), 6(12), 2208-12

CODEN: INOCAJ; ISSN: 0020-1669

DT Journal

LA English

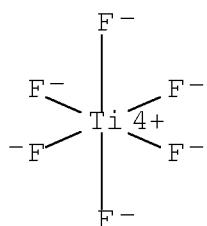
AB The hydrolysis of TiF_4 in various solns. is described. In a 40% TiF_4 aq. soln. evidence is presented for the polynuclear species $[TiF_4 \cdot Ti(OH)_4(H_2O)_2]$. A 19F study of the supernatant liquid from the hydrolysis of the adduct $TiF_4 \cdot 2HC(O)NMe_2$ showed the presence of $TiF_5 \cdot HC(O)NMe_2^-$, $TiF_5 \cdot H_2O^-$, and TiF_6^{2-} . The *cis*- $TiF_4 \cdot 2H_2O$ adduct was found as a product in dil. HF solns. of TiF_4 in water. TiF_6 is stable in water but hydrolyzes in acidic solns.

IT 19200-76-1P

(formation of, in hydrolysis of titanium fluoride (TiF_4))

RN 19200-76-1 HCA

CN Titanate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



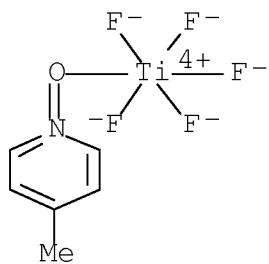
IT 19200-79-4P

(formation of, in hydrolysis of titanium fluoride (TiF_4) in

presence of 4-picoline 1-oxide)

RN 19200-79-4 HCA

CN Titanate(1-), pentafluoro(4-methylpyridine 1-oxide-O)-, (OC-6-21)-
(9CI) (CA INDEX NAME)

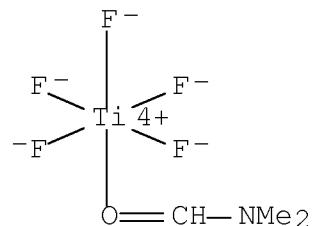


IT 19200-78-3P

(formation of, in hydrolysis of titanium fluoride (TiF₄) in presence of N,N-dimethylformamide)

RN 19200-78-3 HCA

CN Titanate(1-), (N,N-dimethylformamide-O)pentafluoro-, (OC-6-21)-
(9CI) (CA INDEX NAME)

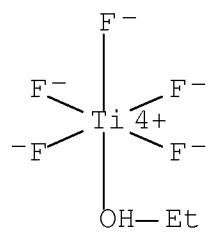


IT 19200-77-2P

(formation of, in hydrolysis of titanium fluoride (TiF₄) in presence of ethyl alc.)

RN 19200-77-2 HCA

CN Titanate(1-), (ethyl alcohol)pentafluoro- (8CI) (CA INDEX NAME)

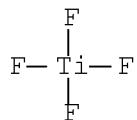


IT 7783-63-3 16894-18-1 21591-33-3

(hydrolysis of)

RN 7783-63-3 HCA

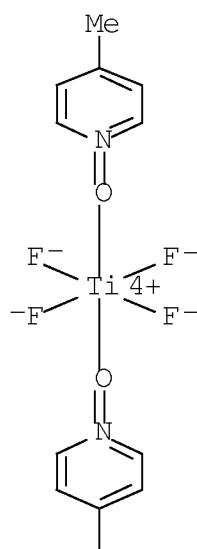
CN Titanium fluoride (TiF₄), (T-4)- (9CI) (CA INDEX NAME)



RN 16894-18-1 HCA

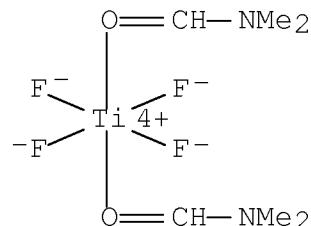
CN Titanium, tetrafluorobis(4-methylpyridine 1-oxide-O)- (9CI) (CA INDEX NAME)

PAGE 1-A



Me

RN 21591-33-3 HCA
 CN Titanium, bis(N,N-dimethylformamide-O)tetrafluoro- (9CI) (CA INDEX NAME)



CC 78 (Inorganic Chemicals and Reactions)
 IT 19200-76-1P 19412-96-5P 19457-80-8P
 (formation of, in hydrolysis of titanium fluoride (TiF₄))
 IT 19200-79-4P
 (formation of, in hydrolysis of titanium fluoride (TiF₄) in
 presence of 4-picoline 1-oxide)
 IT 19200-78-3P
 (formation of, in hydrolysis of titanium fluoride (TiF₄) in
 presence of N,N-dimethylformamide)
 IT 19200-77-2P
 (formation of, in hydrolysis of titanium fluoride (TiF₄) in
 presence of ethyl alc.)
 IT 7783-63-3 16894-18-1 21591-33-3
 (hydrolysis of)

L47 ANSWER 15 OF 18 HCA COPYRIGHT 2008 ACS on STN

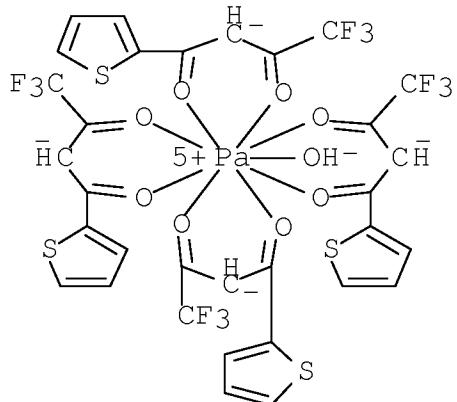
AN 66:14485 HCA Full-text

OREF 66:2815a,2818a

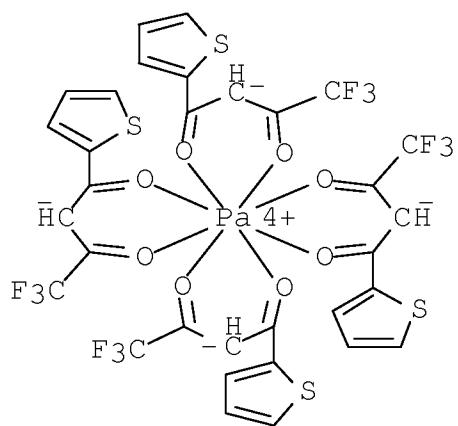
TI Ionic species of protactinium in aqueous solution

AU Guillaumont, Robert

CS Inst. Phys. Nucl., Val-de-Marne, Fr.
 SO Revue de Chimie Minerale (1966), 3(2), 339-73
 CODEN: RVCMA8; ISSN: 0035-1032
 DT Journal
 LA French
 AB cf. CA 64, 13453h; 65, 9813d. Solvent extrn. of Pa in the form of chelates showed the existence of Pa (V) and Pa(IV) without the formation of PaOOH_2^+ and Pa_4^+ species. PaOOH_2^+ is stable in 1-3N HClO_4 and does not polymerize. However, in an acid medium (pH 3) it hydrolyzes to PaO(OH)_2^+ . The Pa_4^+ forms the trimer in 3N HClO_4 even at a concn. of 10-5M. Comparison of the hydrolysis consts. of Pa_4^+ with those of Th^{4+} , U^{4+} , Np^{4+} , and Pu^{4+} shows that this ion is very much more acidic. The complexation const. for PaOOH_2^+ and Pa_4^+ in HNO_3 , HCl , H_2SO_4 , HF , and $\text{H}_2\text{C}_2\text{O}_4$ mediums were also detd. While previous workers suggested the existence of $\text{Pa}(\text{C}_2\text{O}_4)_3^-$ and $\text{Pa}(\text{C}_2\text{O}_4)_4^{3-}$, the author believes that these ions are really $\text{PaOC}_2\text{O}_4^-$ and $\text{PaO}(\text{C}_2\text{O}_4)_2^-$. Also, the ppt. obtained by the addn. of HF to a soln. of Pa(IV) is PaF_2SO_4 and can be transformed to PaF_4 by washing with HF .
 IT 12091-72-4 12102-26-0, Protactinium,
 tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato]-
 (extrn. of, from aq. soln.)
 RN 12091-72-4 HCA
 CN Protactinium, hydroxytetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato-0,0']- (9CI) (CA INDEX NAME)



RN 12102-26-0 HCA
 CN Protactinium, tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato-0,0']- (9CI) (CA INDEX NAME)

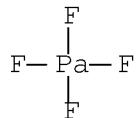


IT 13842-89-2P 14946-90-8P 14946-91-9P

(prepn. of)

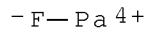
RN 13842-89-2 HCA

CN Protactinium fluoride (PaF₄) (7CI, 8CI, 9CI) (CA INDEX NAME)



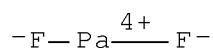
RN 14946-90-8 HCA

CN Protactinium(3+), fluoro-, ion (8CI) (CA INDEX NAME)



RN 14946-91-9 HCA

CN Protactinium(2+), difluoro-, ion (8CI) (CA INDEX NAME)



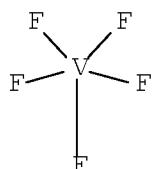
CC 68 (Phase Equilibria, Chemical Equilibria, and Solutions)

IT 12091-72-4 12102-26-0, Protactinium, tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato]-17275-47-7 17275-48-8
(extn. of, from aq. soln.)

IT 120-46-7DP, 1,3-Propanedione, 1,3-diphenyl-, protactinium complex 326-91-0DP, 1,3-Butanedione, 4,4,4-trifluoro-1-(2-thienyl)-, protactinium complexes 13842-89-2P 14016-96-7P
14373-87-6P 14373-89-8P 14691-41-9P 14946-75-9P 14946-76-0P
14946-77-1P 14946-78-2P 14946-79-3P 14946-80-6P 14946-81-7P
14946-82-8P 14946-83-9P 14946-84-0P 14946-85-1P 14946-86-2P
14946-87-3P 14946-88-4P 14946-89-5P 14946-90-8P
14946-91-9P 15091-99-3P 15092-00-9P 15092-01-0P
15213-76-0P 15244-16-3P
(prepn. of)

L47 ANSWER 16 OF 18 HCA COPYRIGHT 2008 ACS on STN
AN 57:27984 HCA Full-text
OREF 57:5556e-f

TI Preparation and properties of vanadium tetrafluoride
AU Cavell, R. G.; Clark, H. C.
CS Univ. British Columbia, Vancouver, Can.
SO Journal of the Chemical Society (1962) 2692-98
CODEN: JCSOA9; ISSN: 0368-1769
DT Journal
LA Unavailable
AB Reaction of VC14 and anhyd. HF in Cl3CF soln. to give pure VF4 is described. The results of d., magnetic susceptibility, and crystallographic measurements on the tetrafluoride are reported. The salt K2VF8 has been obtained from KF and VF4 in SeF4 soln., but the analogous Cs salt cannot be obtained pure. VF4 reacts with NH3 and pyridine to give the same products as does VF5. Other chem. reactions of VF4 are also reported.
IT 7783-72-4P, Vanadium fluoride, VF5
(formation from F and VF4)
RN 7783-72-4 HCA
CN Vanadium fluoride (VF5) (CA INDEX NAME)

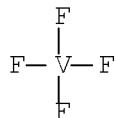


IT 10049-16-8P, Vanadium fluoride, VF4

(prepn. and properties of)

RN 10049-16-8 HCA

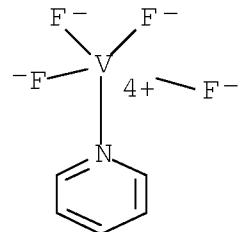
CN Vanadium fluoride (VF4) (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 92275-42-8P, Vanadium, tetrafluoro(pyridine)-
(prepn. of)

RN 92275-42-8 HCA

CN Vanadium, tetrafluoro(pyridine)- (CA INDEX NAME)



CC 14 (Inorganic Chemicals and Reactions)

IT 7783-72-4P, Vanadium fluoride, VF5
(formation from F and VF4)

IT 10049-16-8P, Vanadium fluoride, VF4
(prepn. and properties of)

IT 92275-42-8P, Vanadium, tetrafluoro(pyridine)- 99119-11-6P,
Vanadium, tetrafluoroammine- 101059-20-5P, Selenium fluoride,
SeF4, compd. with VF4 (1:1)
(prepn. of)

L47 ANSWER 17 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 57:9185 HCA Full-text

OREF 57:1832h

TI Chemistry of the difluorides of germanium and tin

AU Muetterties, E. L.

CS E. I. DuPont de Nemours & Co., Wilimington, DE

SO Inorg. Chem. (1962), 1, 342-5

DT Journal

LA Unavailable

AB Ge and Sn are treated with HF to give good yields of the difluoride salts. The complexes of the salts with F- and with org. bases are described. GeF3- has greater hydrolytic stability than SnF3-, and solns. of the latter slowly deposit SnO. All of the complexes are oxidized by O.

IT 13940-63-1

(Derived from data in the 7th Collective Formula Index
(1962-1966))

RN 13940-63-1 HCA

CN Germanium fluoride (GeF₂) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

F—Ge—F

IT 7783-47-3P, Tin fluoride, SnF₂ 127386-52-1P,
Germanium fluoride
(prepn. and properties of)

RN 7783-47-3 HCA

CN Tin fluoride (SnF₂) (CA INDEX NAME)

F—Sn—F

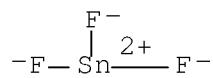
RN 127386-52-1 HCA
CN Germanium fluoride (CA INDEX NAME)

Component	Ratio	Component	
		Registry Number	
F	x	14762-94-8	
Ge	x	7440-56-4	

IT 14314-36-4P, Stannate(II), trifluoro- 18538-21-1P,
Germanate(IV), hexafluoro 21340-04-5P, Stannate(IV),
hexafluoro- 26586-93-6P, Tin, difluoro(methyl sulfoxide)-
91846-04-7P, Germanium, difluoro(methyl sulfoxide)-
(prepn. of)

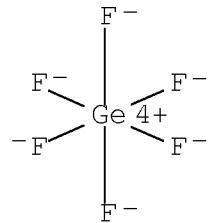
RN 14314-36-4 HCA

CN Stannate(1-), trifluoro- (8CI, 9CI) (CA INDEX NAME)



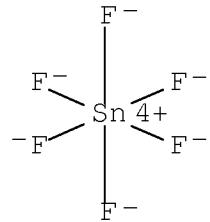
RN 18588-21-1 HCA

CN Germanate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



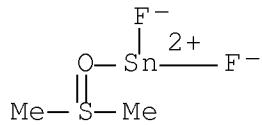
RN 21340-04-5 HCA

CN Stannate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



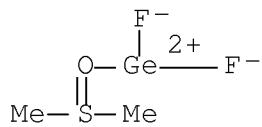
RN 26586-93-6 HCA

CN Tin, difluoro[sulfinylbis[methane]-O]- (9CI) (CA INDEX NAME)



RN 91846-04-7 HCA

CN Germanium, difluoro(methyl sulfoxide)- (7CI) (CA INDEX NAME)



CC 14 (Inorganic Chemicals and Reactions)
 IT 13940-63-1 16893-93-9 16962-19-9 72121-42-7
 (Derived from data in the 7th Collective Formula Index
 (1962-1966))
 IT 7783-47-3P, Tin fluoride, SnF₂ 127386-52-1P,
 Germanium fluoride
 (prepn. and properties of)
 IT 14314-36-4P, Stannate(II), trifluoro- 18538-21-1P,
 Germanate(IV), hexafluoro 21340-04-5P, Stannate(IV),
 hexafluoro- 26586-93-6P, Tin, difluoro(methyl sulfoxide)-
 91846-04-7P, Germanium, difluoro(methyl sulfoxide)-
 (prepn. of)

L47 ANSWER 18 OF 18 HCA COPYRIGHT 2008 ACS on STN
 AN 55:1217 HCA Full-text
 OREF 55:197b-e
 TI Sulfur tetrafluoride. IV. Fluorination of inorganic oxides and
 sulfides
 AU Oppegard, A. L.; Smith, W. C.; Muetterties, E. L.; Engelhardt, V. A.
 CS E. I. du Pont de Nemours & Co., Wilmington, DE
 SO Journal of the American Chemical Society (1960), 82,
 3835-8
 CODEN: JACSAT; ISSN: 0002-7863
 DT Journal
 LA Unavailable
 GI For diagram(s), see printed CA Issue.
 AB cf. CA 54, 14091f. SF₄ reacted with many inorg. oxides and sulfides
 by replacement of the O or S to give corresponding fluorides or
 oxyfluorides. Generally the S was completely replaced by F, but the
 O in some cases was incompletely replaced to give oxyfluorides. The
 following ionic fluorides were prep'd. in pressure vessels at 60-350°
 in 1-12 hrs.: ZnF₂, HgF₂, BiF₃, and FeF₃. The following covalent
 fluorides and oxyfluorides were prep'd. in pressure vessels at 60-435°
 in 0.5-18 hrs.: SF₄.BF₃, TiF₄.2HCONMe₂, GeF₄.2SF₄, SnF₄.2HCONMe₂,
 POF₃, PF₅, SOF₂, S₂O₅F₂, SO₂F₂, SeF₄, MoF₄.2Me₂SO, MoF₆, WF₆, UF₆,
 IF₅, and UF₄. Several covalent fluorides were made in a flow system
 at atm. pressure: UF₆ from UO₃, UF₆ from UO₂F₂, and UF₆ and UF₄ from
 U₃O₈. Expts. with SF₄ and covalent fluorides showed definite compd.

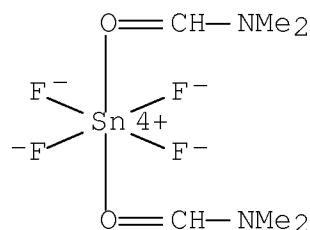
formation: HF-SF₄, SbF₅SF₄, PF₅-SF₄, and AsF₃-SF₄. The structures of the SF₄ complexes were not given, but 3 suggested structures were presented: (1) an acid-base complex, F₃B \leftarrow :SF₄; (2) a salt with SF₃⁺ cation; and (3) a structure with F bridge bonds, infrared and mass spectrometer analyses of some of the products were obtained; and a F nuclear magnetic resonance spectrum for IF₅ was obtained.

IT 21673-68-7 126219-54-3

(Derived from data in the 6th Collective Formula Index
(1957-1961))

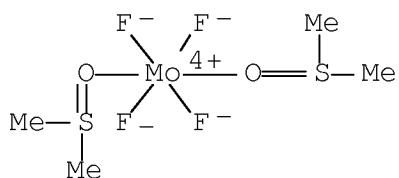
RN 21673-68-7 HCA

CN Tin, bis(N,N-dimethylformamide-O)tetrafluoro-, (OC-6-11)- (9CI) (CA INDEX NAME)



RN 126219-54-3 HCA

CN Methyl sulfoxide, molybdenum complex (6CI) (CA INDEX NAME)



IT 7664-39-3P, Hydrofluoric acid, compds.

with SF₄ 7783-39-3P, Mercury fluoride, HgF₂

7783-49-5P, Zinc fluoride 7783-50-8P, Iron

fluoride, FeF₃ 7783-77-9P, Molybdenum fluoride, MoF₆

7783-82-6P, Tungsten fluoride, WF₆ 7787-61-3P,

Bismuth fluoride, BiF₃

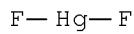
(prepn. of)

RN 7664-39-3 HCA

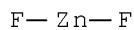
CN Hydrofluoric acid (CA INDEX NAME)

HF

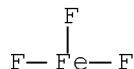
RN 7783-39-3 HCA
CN Mercury fluoride (HgF₂) (CA INDEX NAME)



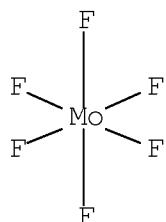
RN 7783-49-5 HCA
CN Zinc fluoride (ZnF₂) (CA INDEX NAME)



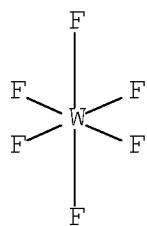
RN 7783-50-8 HCA
CN Iron fluoride (FeF₃) (CA INDEX NAME)



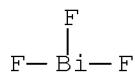
RN 7783-77-9 HCA
CN Molybdenum fluoride (MoF₆), (OC-6-11)- (CA INDEX NAME)



RN 7783-82-6 HCA
CN Tungsten fluoride (WF₆), (OC-6-11)- (CA INDEX NAME)



RN 7787-61-3 HCA
 CN Bismuthine, trifluoro- (CA INDEX NAME)



IT 11133-71-4P, Uranium fluoride
 (prepn. of UF4 and UF6)

RN 11133-71-4 HCA
 CN Uranium fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
U	x	7440-61-1

CC 6 (Inorganic Chemistry)
 IT 17761-33-0 21673-68-7 35963-96-3 35963-97-4
 91443-79-7 126219-54-3 126506-48-7 128601-82-1
 (Derived from data in the 6th Collective Formula Index
 (1957-1961))
 IT 2699-79-8P, Sulfuryl fluoride 7664-39-3P,
 Hydrofluoric acid, compds. with SF4
 7783-39-3P, Mercury fluoride, HgF2 7783-42-8P, Thionyl
 fluoride 7783-49-5P, Zinc fluoride 7783-50-8P,
 Iron fluoride, FeF3 7783-77-9P, Molybdenum fluoride, MoF6
 7783-82-6P, Tungsten fluoride, WF6 7787-61-3P,
 Bismuth fluoride, BiF3 13036-75-4P, Pyrosulfuryl fluoride
 13465-66-2P, Selenium fluoride, SeF4 13478-20-1P, Phosphoryl
 fluoride 25431-30-5P, Antimony fluoride, SbF5, compd. with SF4
 (prepn. of)
 IT 11133-71-4P, Uranium fluoride

(prepn. of UF4 and UF6)